

ABSTRACT OF THE DISCLOSURE

In a high-voltage MOS transistor, source/drain offset regions have the same dopant concentration and the same diffusion depth but the length L_s of the source offset region is set greater than the length L_d of the drain offset region. Accordingly, the resistance value of the source offset region increases, thus raising a source voltage V_S , too. As a result, a substrate voltage V_W minus a forward biased breakdown voltage of silicon can be kept equal to or less than the source voltage V_S more easily, and therefore, a sustaining breakdown voltage of the transistor can be increased.